REMARKS/ARGUMENTS

Favorable reconsideration of this application, in light of the present amendment and following discussion, is respectfully requested.

Claims 1-16 and 47 are pending. Claims 14-46 are canceled. Claims 1 and 7 are amended. Claim 47 is newly added. Support for the amendments to Claims 1 and 7 can be found in Fig. 1 in reference, for example, to lines (118) and (120) in combination with MFCs (112), for example. Additional support can be found in the specification in paragraphs [0047], [0055], and [0061], for example. Support for newly added dependent Claim 47 can be found in original Claim 8, for example. No new matter is added.

In the outstanding Office Action, Claims 1-16 were rejected under 35 U.S.C. § 102(e) as anticipated by Yamasaki et al. (U.S. Patent No. 7,482,283, herein "Yamasaki"), which is assigned to the assignee of the present application.

Regarding the rejection of Claims 1-16 as anticipated by Yamasaki, that rejection is respectfully traversed by the present response.

Amended Claims 1 and 7 recite repeating a plurality of times a cycle alternately comprising first and second steps of supplying process gases into the process container and first and second purge steps of purging the process container, under a film formation temperature of less than 450°C. The first step of supplying both the metal compound gas and nitrogen-containing reducing gas serves to deposit a metal nitride. The second step of not supplying the metal compound gas but supplying the nitrogen-containing reducing gas can anneal the metal nitride thus deposited.

One benefit of carrying nitrogen-containing reducing gas via nitrogen gas applied through a second flow-rate controller as recited in amended independent Claims 1 and 7 is the facilitation of control of the partial pressure of the nitrogen-containing reducing gas.

One benefit of providing cycle repetition and a partial pressure of 30 Pa or less of the nitrogen-containing reducing gas in the first step is that a metal nitride film can be formed with a low resistivity and little or no abnormal growth even where the film formation temperature is as low as less than 450°C (see paragraph [0061]).

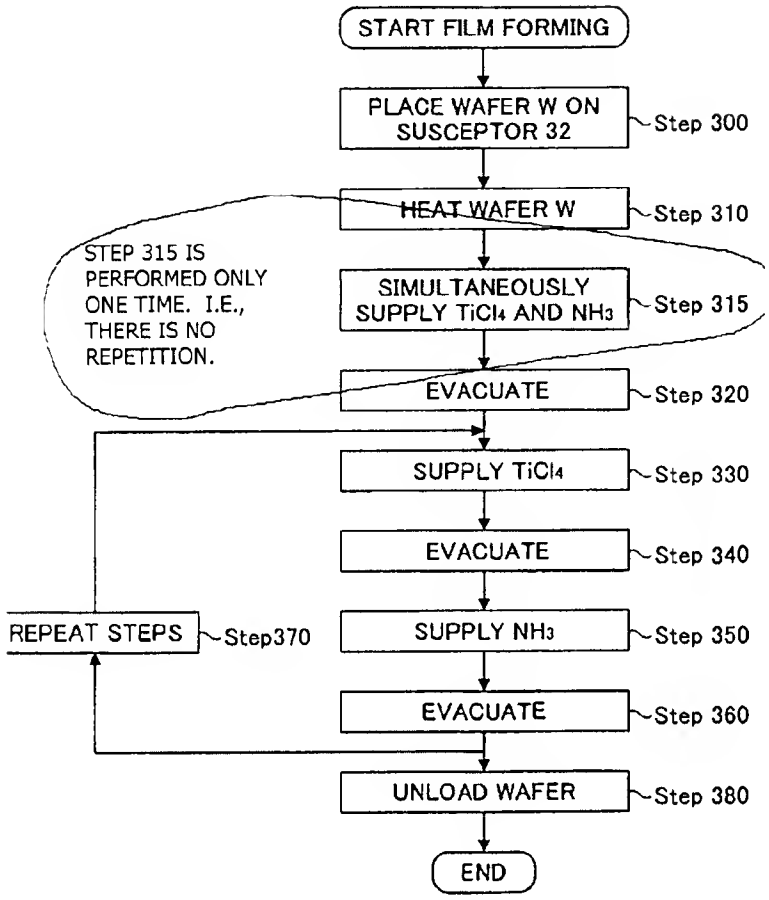
Additionally, with a partial pressure of more than 100 Pa of the nitrogen-containing reducing gas in the second step, the deposited metal nitride can be more reliably annealed, so that, for example, residual chlorine in the metal nitride can be reliably removed where a chloride is used as the metal compound gas (see paragraph [0067]). Since the process container is set to have therein a total pressure of 100 to 667 Pa in the first and second steps, the film formation can typically be performed with high step coverage (see paragraph [0056]).

The outstanding Office Action refers to FIG. 9 of Yamasaki for the process steps recited in the claims and cites step (315) for the "first step of supplying" recited in independent Claims 1 and 7.[1]

However, as shown below in annotated FIG. 9 of Yamasaki, step (315) is performed only a single time. Any repetition provided by Yamasaki is performed after step (315).

[1] Outstanding Office Action, page 3.

FIG.9



Thus, as is clear from annotated FIG. 9 above, Yamasaki describes, in FIG. 9, a step (315) of supplying $TiCl_4$ gas and NH_3 gas. However, this is only **one** step performed at the beginning of film formation. Step (315) is not repeated. In contrast, the methods recited in amended independent Claims 1 and 7 are arranged to **repeat** a cycle including the first and second steps a plurality of times.

In addition, the partial pressure of NH_3 gas used in the step (315) of FIG. 9 of Yamasaki is **301 Pa**, which is far higher than 30 Pa or less recited in amended independent Claims 1 and 7. Accordingly, these claims and the claims depending therefrom patentably distinguish over Yamasaki for at least the reasons discussed above.

In any event, Yamasaki does not suggest certain points of the recited methods which, if implemcnted in Yamasaki, could result in a decrease in throughput as a sacrifice to make the film formation temperature lower. As discussed above, the recited film formation is performed by **repeating a cycle a plurality of times** while varying the partial pressure of the nitrogen-containing reducing gas between the first and second steps of the cycle but maintaining the total pressure within the process container to be 100 to 667 Pa in the first and second steps. Yamasaki is silent regarding these featurcs.

For the foregoing reasons, it is respectfully submitted that this application is now in condition for allowancc. A Notice of Allowance for Claims 1-16 and 47 is earnestly solicitcd.

Should Examiner Nguyen deem that any further action is necessary to place this application in even better form for allowance, Examiner Nguyen is encouraged to contact Applicants' undersigned representative at the below-listed telephone number.

Respectfully submitted,

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